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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/027,743	12/20/2001	David M. Weber	01-647	3790

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EXAMINER	
FRANKLIN, RICHARD B	
ART UNIT	**PAPER NUMBER**
2181	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/12/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/027,743	WEBER ET AL.	
	Examiner	Art Unit	
	Richard Franklin	2181	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11 December 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3,13,15-18 and 21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3,13,15-18,21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1, 3, and 13, 15 – 18, and 21 are pending.

Response to Arguments

2. Applicant's arguments filed 11 December 2006 have been fully considered but they are not persuasive. All references to the specification of the current application will be in reference to US Patent Application Publication No. 2003/0120791 (hereinafter Weber), which is the publication of the current application.

Applicant argues that the relied upon references, US Patent No. 4,939,735 (hereinafter Fredericks) in view of US Patent No. 6,862,293 (hereinafter Lay), teaches an apparatus capable of transferring data across a single-thread, multiple-speed protocol method and a multiple-thread, single-speed protocol method (See Applicants Remarks; Page 8 Paragraph 1). Applicant states that Lay fails to recite the terms "single-thread, multiple-speed protocol method" and a "multiple-thread, single-speed protocol method" (See Applicants Remarks; Page 8 Paragraph 1). The Examiner respectfully disagrees. In the specification of the current application, Applicant has defined a "single-thread, multiple-speed protocol method" as "1 Gigabit, 2 Gigabit, and 4 Gigabit" protocol methods (Weber; Paragraph [0004] Lines 7 – 9). Applicant has also defined a "multiple-thread, single-speed protocol method" as a "10 Gigabit" protocol method (Weber; Paragraph [0004] Lines 7 – 9). The relied upon reference teaches the use of a "10 Gb/s link" and "either a 1 Gb/s link or a 2Gb/s link" (Lay; Col 7 Lines 29 – 31). Therefore, even though the relied upon reference does not teach the specific

words used by applicant, the references do teach the use of protocols that are recited as the definitions of applicants words. Therefore, the relied upon references teach all of the limitations of the pending claims.

Claim Rejections - 35 USC § 112 - 1st Paragraph

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 18 and 21 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The written description does not describe what a "multiple-thread, multiple-speed protocol method" is.

4. Claims 18 and 21 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The specification has not shown how the claimed circuitry is enabled to process the "multiple-thread, multiple-speed protocol method."

Claim Rejections - 35 USC § 112 - 2nd Paragraph

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 18 and 21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

It is not clear what a "multiple-thread, multiple-speed protocol method" is, as neither the specification nor claims have defined or given any examples of the term. Also, it is noted that a "multiple-thread, multiple-speed protocol method" is not a requirement of the claims, and only presents a choice as to which two of the three presented protocol methods may be used.

Because of the numerous deficiencies of claims 18 and 21, as noted by the rejections under 35 USC 112 above, the Examiner is not able to ascertain the meets and bounds of the claims. Therefore, claims 18 and 21 will not be further treated on the basis of prior art.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 1 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No 4,939,735 (hereinafter Fredericks) in view of US Patent No 6,862,293 (hereinafter Lay).

As per claim 1, Fredericks teaches an apparatus, comprising a single die (Fredericks; Figure 2 Item 17); a first circuitry disposed on said single die including: a deserializer for converting at least one serial differential bit stream into a character stream (Fredericks; Figure 2 Item 90B); a decoder receiving said character stream to form a decoded data stream (Fredericks; Figure 2 Item 100B); and a means for aggregating said decoded data stream and reconstructing a parallel word according to a desired protocol definition (Fredericks; Figure 2, Col 2 Line 61 – Col 3 Line 36); a second circuitry disposed on said single die including: a means for presenting a second parallel word according to said desired protocol definition to form an altered data stream (Fredericks; Figure 2 Item 40A, Col 2 Line 61 – Col 3 Line 36), an encoder receiving said altered data stream to form an encoded data stream (Fredericks; Figure 2 Item 50A); a serializer for converting said encoded data stream into said at least one serial differential bit stream (Fredericks; Figure 2 Item 60A).

Fredericks does not teach wherein the first and second circuitry are capable of transferring data across at least two interconnect protocol definitions, the at least two interconnect protocol definitions including a single-thread, multiple-speed protocol method and a multiple-thread, single-speed protocol method.

However, Lay teaches a high speed link that is capable of implementing at least two interconnect protocol definitions, the at least two interconnect protocol definitions including a single-thread, multiple speed protocol method (Lay; Col 7 Lines 29 – 31 "1 Gb/s link or a 2 Gb/2 link") and a multiple-thread, single-speed protocol method (Lay; Col 7 Lines 29 – 31 "10 Gb/s link").

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the teachings of Fredericks to include the multiple protocol methods because doing so allows for existing hardware to support a data rate increase to ten gigabits per second (Lay; Col 2 Lines 15 – 21).

As per claim 3, Lay also teaches wherein the at least two interconnect protocol definitions include 10 Gigabit Fibre Channel protocol definition (Lay; Col 7 Lines 29 – 31) and a 2 Gigabit and 1 Gigabit Fibre Channel protocol definition (Lay; Col 7 Lines 29 – 31).

7. Claims 13, and 15 – 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No 4,939,735 (hereinafter Fredericks) in view of US

Patent No. 7,010,612 (hereinafter Si) and further in view of US Patent No 6,862,293 (hereinafter Lay).

As per claim 13, Fredericks teaches an apparatus comprising a single die (Fredericks; Figure 2 Item 17); means for transforming at least one serial differential bit stream into a parallel word (Fredericks; Figure 2 Item 20); said transforming means being disposed on said single die (Fredericks; Figure 2); means for converting a second parallel word into at least one serial differential bit stream (Fredericks; Figure 2 Item 16); and said converting means being disposed on said single die (Fredericks; Figure 2).

Fredericks does not teach the converting means including an input selector in which the apparatus operates according to a selected protocol definition; wherein the transforming means and converting means are capable of implementing at least two interconnect protocol definitions, the at least two interconnect protocol definitions including a single-thread, multiple-speed protocol method, and a multiple-thread, single-speed protocol method.

However, Si teaches a universal serializer/deserializer wherein the converting means includes an input selector in which the apparatus operates according to a selected protocol definition (Si; Col 3 Lines 48 – 50); capable of transforming at least one serial differential bit stream into a word in accordance with at least two interconnect protocol definitions (Si; Col 1 Lines 49 – 56).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the teachings of Fredericks to include the

multiple protocol methods because doing so allows for the device to be adapted, after manufacture, to communication in a protocol of choice (Si; Col 3 Lines 27 – 34).

Fredericks in combination with Si does not explicitly teach wherein the at least two interconnect protocol definitions including a single-thread, multiple-speed protocol method and a multiple-thread, single-speed protocol method.

However, Lay teaches a high speed link that is capable of transferring data across at least two interconnect protocol definitions, the at least two interconnect protocol definitions including a single-thread, multiple speed protocol method (Lay; Col 7 Lines 29 – 31 "1 Gb/s link or a 2 Gb/2 link") and a multiple-thread, single-speed protocol method (Lay; Col 7 Lines 29 – 31 "10 Gb/s link").

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the teachings of Fredericks in combination with Si to include the multiple protocol methods because doing so allows for existing hardware to support a data rate increase to ten gigabits per second (Lay; Col 2 Lines 15 – 21).

As per claim 15, Lay also teaches wherein the at least two interconnect protocol definitions include 10 Gigabit Fibre Channel protocol definition (Lay; Col 7 Lines 29 – 31) and a 2 Gigabit and 1 Gigabit Fibre Channel protocol definition (Lay; Col 7 Lines 29 – 31).

As per claims 16 and 17, Si also teaches wherein transforming means includes a deserializer (Si; Figure 2 Item 250), a decoder (Si; Figure 3 Item 318), and an aggregator (Si; Figure 2 Item 204) capable of implementing at least two interconnect protocol definitions and converting means includes a data presenter (Si; Figure 6 Item 612), an encoder (Si; Figure 6 Item 616), and a serializer (Si; Figure 6 Item 600) capable of implementing at least two interconnect protocol definitions.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

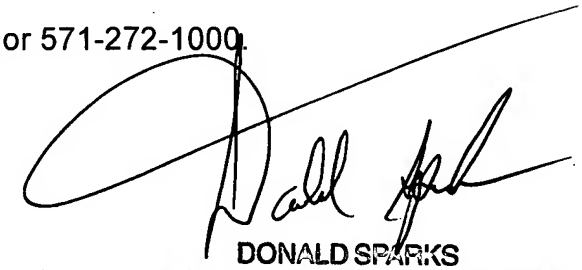
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard Franklin whose telephone number is (571) 272-0669. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Donald Sparks can be reached on (571) 272-4201. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Richard Franklin
Patent Examiner
Art Unit 2181



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